

author has examined the blood of a number of vertebrates and has compared them with specimens taken from South African cattle and blood from obscure cases of human anemia. Viewed in the fresh, anaplasmas appear as small rounded granules without morphological differentiation within the erythrocytes. They usually are single, but forms apparently dividing may be seen. They show no differentiated structures by intra-vitam staining. In stained preparations these structures are usually round, rarely irregular and take a deep chromatin or basophilic stain. Forms resembling diplococci are not uncommon. The author comes to the conclusions reached by a number of others, which is to the effect that the so-called "anaplasmas" are not protozoa but that they represent a product of the degeneration of the red cells due to the action of some vital substance or substances in the host. They occur in healthy and anemic vertebrate bloods, both warm and cold blooded. The author is of the opinion that probably these bodies are of nuclear origin.

A Test for Urobilin in Urine and Feces.—A. EDELMANN (*Wien. klin. Wchnschr.*, 1915, xxviii, 978) describes a modification of Schmidt's urobilin test which is applicable to both urine and feces and which is much quicker than the original test. Instead of a saturated aqueous solution of bichloride of mercury he employs a saturated alcoholic solution; the latter contains about twice as much bichloride as to the aqueous solution. The technic for applying the test to the urine is as follows: Two reagents are necessary: (1) a concentrated alcoholic solution of bichloride of mercury; (2) a 10 per cent. alcoholic solution of zinc chloride, and amyl alcohol; about 10 c.c. of urine in a test-tube are treated with half the volume of concentrated alcoholic sublimate solution, mixed, and then shaken with amyl alcohol (which is best accomplished by pouring the contents down the wall of a second test-tube several times.) To the clear amyl alcohol layer which quickly separates above, several cubic centimeters of the alcoholic zinc chloride solution are added; or the amyl alcohol may be poured into another tube and treated with zinc chloride. With large amounts of urobilin the amyl alcohol is saturated with the pigment and shows a beautiful rose red color (only with pathological amounts of urobilin) and the addition of zinc chloride produces an intense green fluorescence. With small amounts of urobilin, if the fluorescence is not visible with diffuse light, the light may be focussed on the tube with a convex lens, or the light from a small electric flash may be employed. By this means traces of urobilin may be detected. In applying this test to the stools, several grams of feces are rubbed in a mortar with a very small amount of water. Then an excess of reagent I is added, and rubbed a minute longer and filtered into a clean test-tube. To the filtrate, which is red in the presence of urobilia, the addition of a few cubic centimeters of solution II causes a green fluorescence.

The Sterilization of Fluids by Means of Animal Charcoal.—R. KRAUS and B. BARBARA (*Wien. klin. Wchnschr.*, 1915, xxviii, 1031) have previously shown that animal charcoal adsorbs typhoid and

cholera bacilli from water, so that the water may be bacteria-free after one hour. Further experiments have shown that this result may be accomplished in a much shorter time. Thus, 100 c.c. of distilled water, 1 gram of animal charcoal + $\frac{1}{100000}$ loop of cholera culture per cubic centimeter were shaken together. After fifteen minutes 1 c.c. of the filtered fluid was placed upon agar plates. After twenty-four hours the plates were sterile. With typhoid bacilli they found it necessary to use three to four times as much charcoal to make the water sterile. They have used this method in an attempt to sterilize milk and found that 100 c.c. of milk bought in the market, when shaken with 3 grams of animal charcoal and allowed to stand fifteen minutes, can be passed through a filter paper and recovered bacteria-free. For the sterilization of serum the method has also proved useful. Anti-agglutinins, for example, are not adsorbed by charcoal, as are toxins. Antidiphtherin serum loses none of its potency when treated in this way, though there is a loss in filtering through bacteriological filters.

Spontaneous Agglutination of the Erythrocytes in Malaria.—R. BIELIERI (*Wien. klin. Wchnschr.*, 1915, xxviii, 1054) had his attention called to the fact that red blood corpuscles in malarial blood frequently clump on the slide when a preparation is made by the Ross thick drop method. This phenomenon has not been observed with normal blood. Mornaco and Panici have described an agglutination which occurs when the serum from malarial patients is mixed with human corpuscles. French observers have also noted an agglutination of the erythrocytes in patients suffering with trypanosomiasis. The author examined the blood of 600 patients ill with malaria and 158 of the specimens showed agglutination of the red blood corpuscles in the thick drop. This spontaneous agglutination was found with equal frequency in tertian and quartan infections and somewhat oftener in estivo-autumnal. In 54 cases which exhibited symptoms of malaria, in whose blood no parasites could be found, agglutination was also observed. Spontaneous agglutination of the erythrocytes was also found in septicemia and in pregnancy. The cause of the agglutination has not been discovered.

SURGERY

UNDER THE CHARGE OF

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A Simple Operation for Femoral Hernia.—BRUNZEL (*Deutsch. Ztschr. f. Chir.*, 1916, cxxxv, 67) says that, as a rule, the chief obstacle to the complete closure and removal of the femoral canal is the very tense and